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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,791	04/13/2001	Sindo Kou	032026:0546	8377
23524	7590	10/20/2003	EXAMINER	
FOLEY & LARDNER 150 EAST GILMAN STREET P.O. BOX 1497 MADISON, WI 53701-1497			SONG, MATTHEW J	
			ART UNIT	PAPER NUMBER
			1765	

DATE MAILED: 10/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Advisory Action</b>	<b>Application No.</b> 09/834,791	<b>Applicant(s)</b> KOU ET AL.	
	<b>Examiner</b> Matthew J Song	<b>Art Unit</b> 1765	

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 29 September 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see continuation sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_

Claim(s) objected to: \_\_\_\_\_

Claim(s) rejected: 13-38.

Claim(s) withdrawn from consideration: 1-12.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
10. ☐ Other: \_\_\_\_\_

**NADINE G. NORTON**  
**PRIMARY EXAMINER**

*Nadine G. Norton*

***Response to Arguments***

**Continuation of Item 5:**

Applicant's arguments filed 9/29/2003 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Azad reference teaches a baffle between two heaters, which is used as a barrier concentrates the heat of the lower heater below the level of the baffle (col 4, ln 65 to col 5, ln 5). Kobayashi et al teaches the subheater 33 functions as a radiation shield which shields the lower portion of the crucible 31 from the heat irradiated toward this portion from the main heater 32, this serves to form the solid layer in the lower portion easily (col 9, ln 45-65). Therefore, Kobayashi teaches the desirability of shielding the lower heater section from the main heater section. The baffle of Azad further improves the effect of shielding the lower heater from the main heater by concentration the lower heater effects below the level of the baffle.

Applicant arguments regarding claim 38 have been considered but are not found persuasive. Applicant alleges that teaches the molten material is gradually solidified and not solidified rapidly. The Examiner agrees that Kobayashi teaches the molten material is gradually solidified, as suggested by applicant. However, the applicant has attempted to show a difference

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between indefinite terms, namely “rapidly” and “gradually”. The definition of “gradually” (the rate of cooling) is not defined by Kobayashi and the definition of “rapidly” is not disclosed by applicant; therefore a definitive difference cannot be made between “gradually” and “rapidly”. The Examiner maintains that the rapid cooling claimed by applicant is inherent to Kobayashi because Kobayashi teaches a similar method of solidifying a molten region by turning of a heater and the position of the heater is lower than the lower end of the inner crucible. Applicant has not provided evidence that the solidification process is different than the rapid process claimed by applicant.

Applicant’s argument that the rapid solidification is different from directional solidification is not persuasive because it is view as mere attorney argument, which lacks evidence.